

replacements, which comply with prior editions of this code need not be modified to comply with these rules..." This rule was effective in 1977 and applied to prior editions back to the 6<sup>th</sup> Edition, published in 1960. The 6<sup>th</sup> edition of the Code essentially required existing installations to be modified to comply with the standards in the 1960 edition. Additionally, the Rule 013B.1 of the current NESC states: "Where an existing installation meets, or is altered to meet, these rules, such installation is considered to be in compliance with this edition and is not required to comply with any previous edition." Together, this means that if a facility is in compliance with the rules that existed at the time the attachment was made or if that facility is in compliance with the current edition of the Code, it is not a violation.

54. The NESC Handbook confirms this:

Rule 013.B.1 now reflects that the latest edition contains the best knowledge of appropriate requirements. If an installation meets the present requirements, it is acceptable regardless of what provisions may have been in effect at the time of its construction. Thus when work on an existing structure is completed, it may meet the current edition requirements or those of a previous applicable edition.

55. Mr. Buie relies on these fundamental misconceptions in Paragraphs 70, 71 and 72 of his Declaration to effect further distortions to the Code. He states that Rule 235c2b(1)(a) exception 1 is not a basic provision of the code. As shown above, the NESC says exceptions have the same force and effect as the rule to which it applies. Here is a list of a few, but not all, of the distortions and errors that Mr. Buie applies to this case. For example:

- In paragraph 74 he pointed out that the 4-inch separation between cables in spans was first in the NESC in 2002. This illustrates a misapplication of Rule 013.B.1.
- In paragraph 75 is a misinterpretation of NESC rule 015.D.
- In paragraph 78 of his declaration finds fault with my example pole 321 of circuit V210. However, if we compare the USS inspection work sheet for this pole in Harrelson exhibit 12 to the photograph in Buie exhibit G, the photograph does not match USS's work sheet or Mr. Buie's description. USS identified one violation, namely 34 inches between neutral and cable.
- In paragraph 80, Mr. Buie stated that poles 604 and 608 of circuit V620 had secondary cables going up the poles rather than primary (high voltage) cables. He goes on to say photographs of the poles are in attachment H. The photos in his attachment H shown no risers at all but rather a street light close to cable.

### **Many Plant Configurations That EAI Terms "Violations" Are Not**

56. Another major factor in this dispute has been EAI's insistence to call things "violations" that are not violations at all. On some of these, Arkansas operators are willing to accommodate EAI and bring their facilities into compliance with some of Entergy's preferred standards. These standards are for such things as bonding to every pole, placing separate anchors for all necessary guys, placing guy markers on all guys, and other

items. While cable operators agree that accommodations on some of these points is reasonable, it is essential to understand that Entergy's MO in Arkansas is to call items like these, as well as other items like joint anchors and the 30-inch to neutral at-pole separation requirement violations when they are not. Stated another way, Entergy is classifying any cable facility that does not correspond with its own (and in most cases incorrect) assessment as violations by cable operators, while overlooking its own violations and those of other parties. Among other things, this creates the mis-impression that cable is responsible for tens of thousands violations and that nobody else—particularly EAI itself—has created violations. It is a simple formula. If cable has created the violations, it must pay to correct them. But I do not believe that this accurately reflects either Arkansas field conditions, or the truth behind EAI's inspection program—that cable operators need to be singled out because of their poor safety records. If EAI's dominant concern is plant safety other than, say, seeking others to pay for its inspection programs and plant correction, then it would do well to look at its own plant. In fact, EAI's own plant has what I would estimate tens of thousands of critical violations that are far too numerous to catalogue here. The photo appearing below is but one example.



- 38A -

This photograph, which was taken at the direction of Comcast's Marc Billingsley, shows a hot EAI electric service lying on the ground of some woods near a residential area in Little Rock. This hazard was initially reported to EAI by USS during its "safety audit." Comcast discovered it during a follow up engineering trip to the pole, identified by USS. Entergy still had not reattached it to the pole as of June 7, 2005. A hot wire on the ground is a serious hazard to the public. This illustrates a major clear disconnect between EAI's claimed emphasis on safety and its trouble response department.

### **Not Bonding To Every Ground Is Not A Violation**

51. On the issue of bonding to electric grounds, Mr. Dagenhart is exactly correct in stating (in paragraph 9 of his declaration) the four-ground connections-per-mile NESC requirement. With approximately 24 poles per mile of line, this would require about one-sixth of the poles to be bonded. He correctly explains in paragraph 11 of his declaration that electric and communications systems are required to meet the basic requirements of the

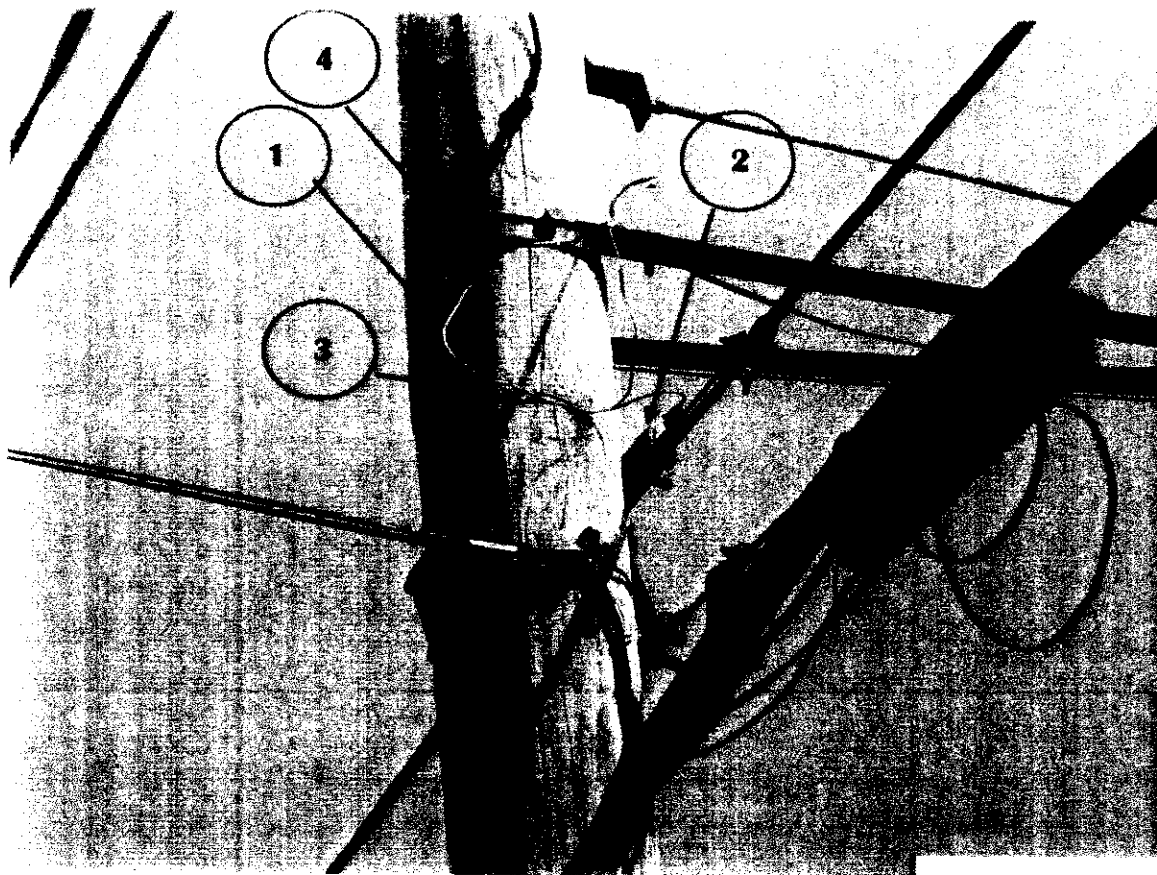
NESC. ACTA members do not now object to bonding messenger wires to EAI pole ground wires on every pole going forward. But in my opinion it is unreasonable to call missing bond connections *violations* and dangerous. It is also unreasonable to characterize this condition and many other non-violations as justification for an unjust, disruptive and expensive audit, permit freeze, and hostility toward cable. I would also note that where the electric company's neutral wire is not adequate or properly maintained that this code requirement can cause the cable strand to become the power company's neutral and present serious hazards.

### **Separations From Electric Facilities**

58. The cable operators participating in this case have not contended that EAI should be allowed to design only to the basic provisions of the NESC. They have simply asked EAI that a few NESC provisions specific to communications including the specific rules governing separations between power and communications facilities at the pole, as well as in the spans between the poles, be accepted on poles where EAI does not have adequate space for EAI's greater requirements. While EAI uses some, they do not use all of these NESC basic provisions.

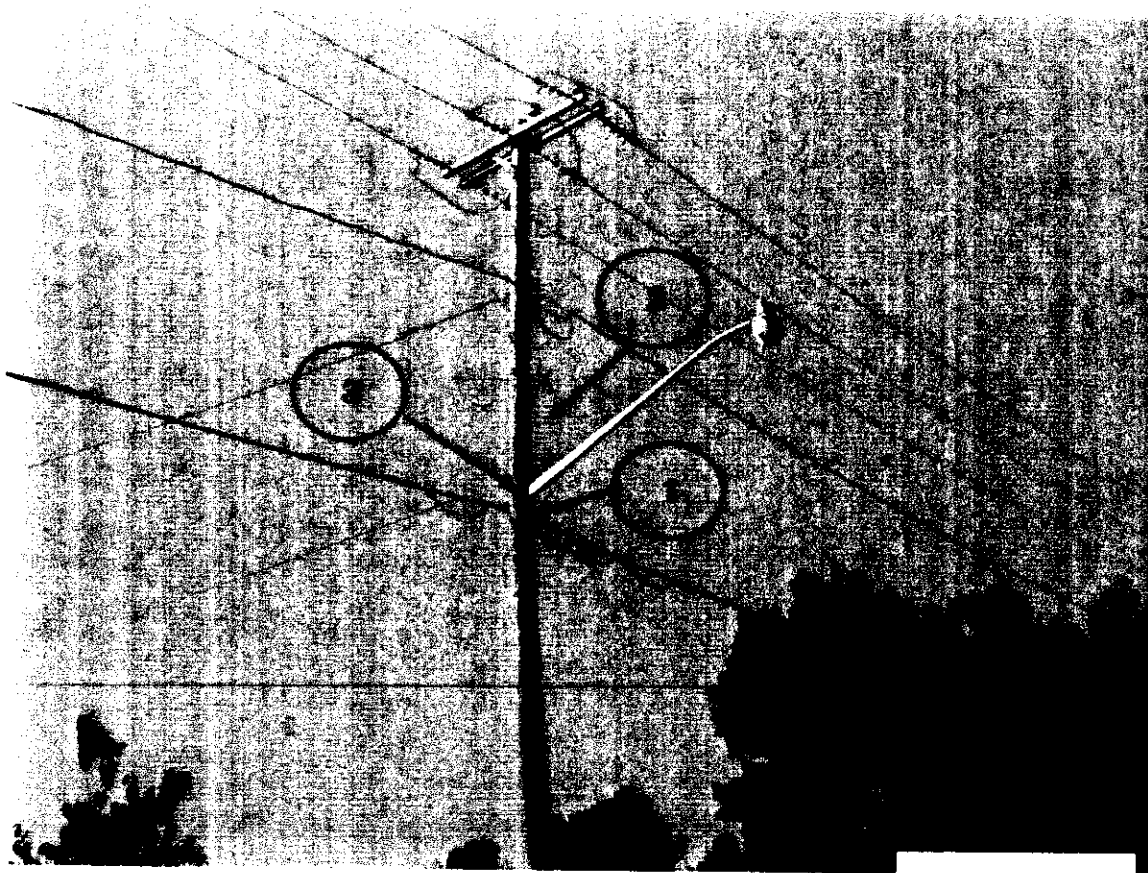
59. For example, EAI accepts 12-inch separation from 120-volt electric leads going into street lights. EAI, will not accept 30 inches separation from the electric neutral wire at 0 volts. It requires 40 inches, the same as for wires up to 8,700 volts.

69. In addition, EAI did agree to use some of these NESC rules for "past" violations and on a case-by-case basis, but only with a PE certification. Ironically, some NESC basic provisions for employee safety have been overlooked by EAI and USS, as well as some of EAI's design specifications which exceed NESC. Examples of these include the NESC requirement of 20 inch separation between a non-grounded light bracket and communications, and the EAI design specifications that all light brackets be grounded. Another hazardous EAI practice which violates EAI standards and the NESC is connecting neutral conductors from lights and other equipment directly to pole ground wires and even using neutral conductors to first "ground" light brackets and then connect to pole grounds. The two photographs below are two very good examples of this problem.



- 41A -

This photo, which I took, shows a street light which EAI could readily have installed in compliance with the NESC but the white lead from the light (Arrow #1) runs down the pole until it almost touches the cable tv attachment (Arrow #2) and does touch the cable bond wire (Arrow #3). Then this white street light lead goes back up and connects to the EAI pole ground wire (Arrow #4). EAI has created three violations here. First, street light leads must be 12" above CATV. Second, the white neutral lead must connect to a neutral conductor (wire) not a pole ground wire. Third, the street light bracket must be grounded, or, the bracket must be 20 inches from cable. EAI's contractor, USS, which inspected this pole has seldom noted a street light grounding violation and never noted an incorrectly connected neutral. These numerous violations of the basic provisions of the NESC create real hazards to communications workers and electric workers alike and are the responsibility of the electric company to correct. Jacksonville, AR. N. First St.



- 42A -

This photo which I took, shows a street light placed much too close to cable (Arrow #1). One hot wire lead (120 v.) hangs down alongside the pole (Arrow #2). The neutral wire for the light is connected to the pole ground at the same level as the cable television attachment. The bracket is not grounded (Arrow #3). There are four significant EAI violations at this location: (1) the street light leads are less than 12 inches to cable; (2) the bracket is grounded and is less than 20 inches to cable; (3) the neutral is connected to pole ground; (4) the long, hot wire is not secured to the pole. Location: Little Rock Mablevale Pike.

### **Not Having 12 Inches Of Separation Between Communications Facilities Is Not A Violation**

61 The twelve-inch separation standard between telephone cables and telephone and cable facilities has been a Bell System standard and an industry-wide rule of thumb for decades. Generally, communications parties complied with it when it was sensible to do so, but it very frequently has not been followed in the field. Many electric power companies had this standard



it in their contracts but the agreements typically were silent on remedies for non-compliance. Finally, in 2002 this twelve-inch standard was incorporated into the NESC at Section 235H as a new NESC requirement. Of course, (and as I discuss elsewhere) the new 2002 requirement grandfathers all prior non-compliant installations.

62. It is very informative to read the actual new requirement:

235H.1. The spacing between messengers should (*my emphasis*) be not less than 30mm (12 in) except by agreement between the parties involved.

235H.2 The clearances between the conductors, cables, and equipment of one communication utility to those of another, anywhere in the span, shall be not less than 100mm (4 in), except by agreement between the parties involved.

63. This is an important point because Entergy and USS have treated less than 12 inches of separation between communications cables as violations and have cited them for thousands of these items. The 12-inch standard certainly was not an NESC violation prior to 2002. Moreover, the words that the 2002 Code adopts are normative (“should”) and not mandatory (“shall” or “will”). The standard set forth in Section 235H.2, however, is mandatory (“shall”) but was only adopted in 2002. In fact, no specific separation in the span (*i.e.*, in the lines between the poles, as opposed to at the poles) at all was required by the NESC until the 2002 edition. This means that if the facility was installed before 2002 and there was less than four inches of span clearance, then that facility is compliant. Equally important, paragraph 235H.2 allows communications companies to agree

otherwise. This entire issue of separations between communication cables is more about limiting damage to cables, than addressing concerns for worker or public safety.

### **Entergy Is Not Complying With Its Own Standards**

64. Despite the significant misgivings I have about a number of assertions that Entergy has made in connection with this dispute, I would not be surprised if Entergy's basic standards for overhead line construction were good and reasonable. I am quite familiar with standards like these, and I have seen excerpts of Entergy's that are attached to some agreements. But I have not seen a complete set.

65. Pole owners including EAI usually (and should) have standards which first assure compliance with all applicable NESC rules.

66. The NESC is not a specifications manual or a design standard, nor should it be. Company specific manuals specify many details including materials to be used such as wood, steel or concrete poles, fiberglass, wood or steel crossarms, porcelain or polymer insulators and thousands of other details which are options in the NESC so long as the materials meet basic code requirements. The NESC details what is to be accomplished with respect to safety.

67. Manuals do not include every combination of facility which eventually gets installed on a pole. Manuals specify the spacing to be used on relatively clean poles by the use of drawings with dimensions. No manual

attempts to require the shortest pole, for example, that would meet the NESC requirements of what is placed on the pole initially. Good practice is to place tall enough poles to allow for addition of electric facilities and communications facilities over a period of years.

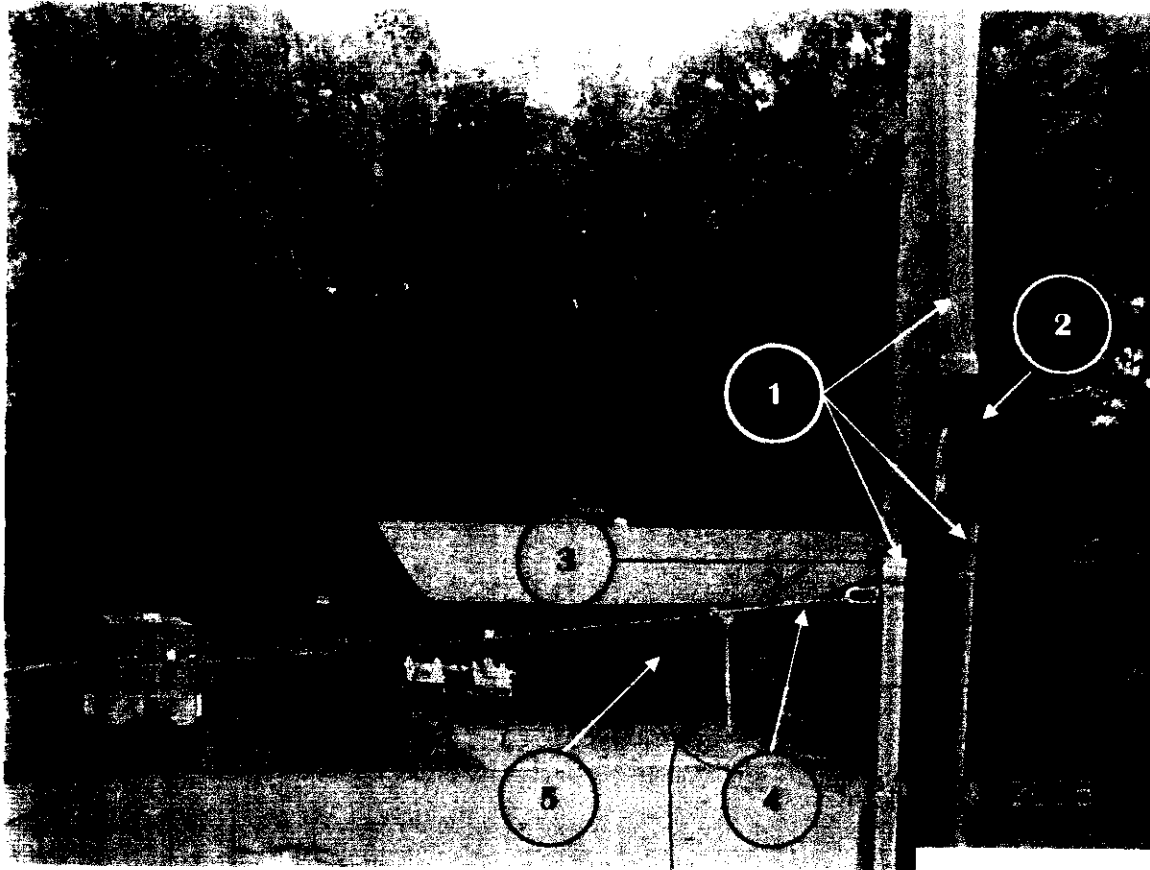
68. As long as the pole owner complies initially with the NESC and its own standards, the communications attachers can and should comply with owner standards and the NESC. As the pole fills up over time with additional facilities, the NESC and common sense come into play. Neither owner nor attacher should keep adding facilities to a pole until it violates the NESC, but it is inefficient, not necessary for safety and financially irresponsible to replace a pole if the existing pole complies with the NESC.

69. Over the last several months I am aware that certain Arkansas operators have requested EAI to provide a complete copy of its design and construction standards. While Entergy agreed to provide them, they did not ultimately do so. This is a problem for a number of reasons.

70. First, it is impossible to engineer, build and maintain facilities in compliance with Entergy's standards if the attaching parties do not know what those standards are. This has been a particularly acute problem because the ultimate arbiter on these standards has not proven to be EAI, but its contractor USS. As others discuss, it is not unusual for an EAI representative like Brad Welch to agree to one set of engineering solutions and for a cable operator to make plans to comply with that, only to be

subsequently overruled by USS. Indeed, it would not surprise me at all if the reason that EAI has not provided operators with the complete set of its own standards is because it would be readily apparent that they would be in violation of those standards on essentially a system-wide basis.

71. As indicated previously, I am very familiar with these kinds of engineering guidelines. But after nearly two years and innumerable visits to the field in Arkansas, there is no question that the condition of Entergy's own aerial plant shows the need for serious system-wide training and correction. The EAI joint-use specifications that I have seen are generally well-defined, and except where I have noted otherwise, reasonable for new Entergy pole installations. If Entergy were to follow those specifications when it installs its facilities, then we would have many fewer problems in Arkansas. But this is a big "if." The following medley of photos and descriptions makes this point very strongly.



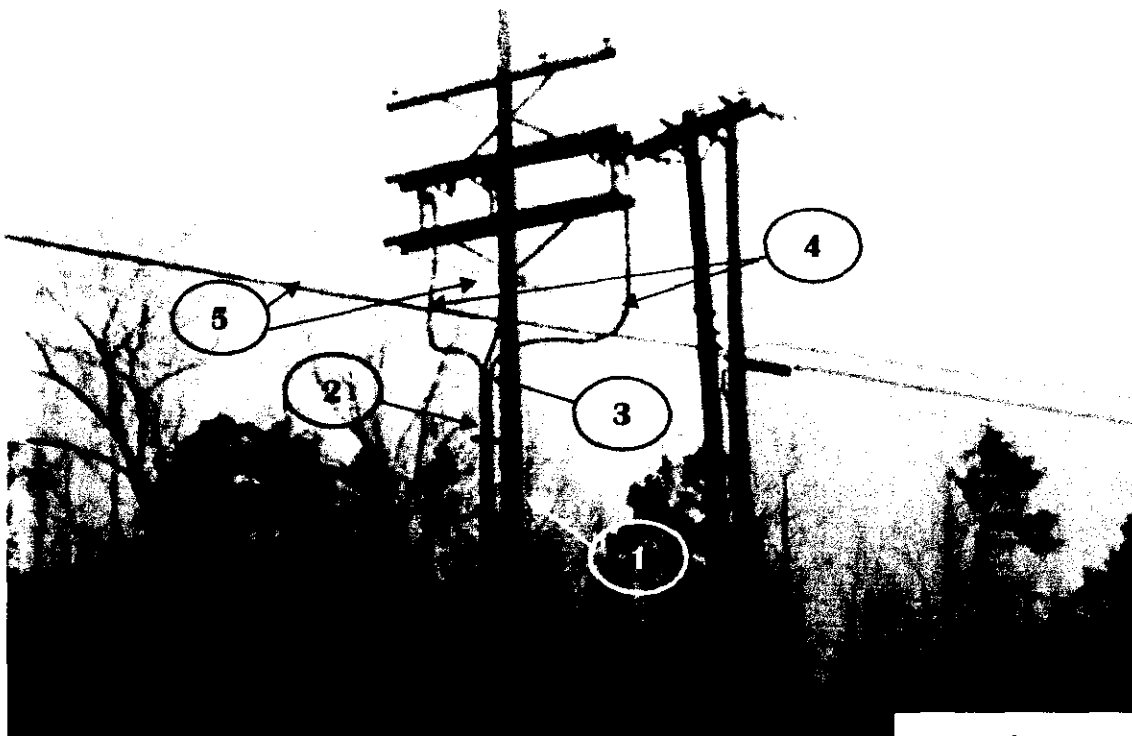
-47A-

This is a pole that Cox asked Entergy to replace for its upgrade in Malvern. It is a brand new pole, so EAI was starting with a clean slate. The first problem is that EAI has installed the riser conduits poorly (Arrow #1). The black cables visible in the photos are hot electric cables leading from a transformer at the top of the pole to an underground electric service installation (Arrow #2). The top of the conduit (Arrow #3) is about two or three inches from Cox's cable TV facility (Arrow #4). The dangling wire visible about a foot to the left of the pole (Arrow #5) is one of Cox's customer service drops that Entergy did not re-connect after it replaced the pole and took the liberty to transfer Cox facilities. Another major problem is that this is a dead-end pole, that EAI did not guy. All dead-end poles must have guys to balance load tension.



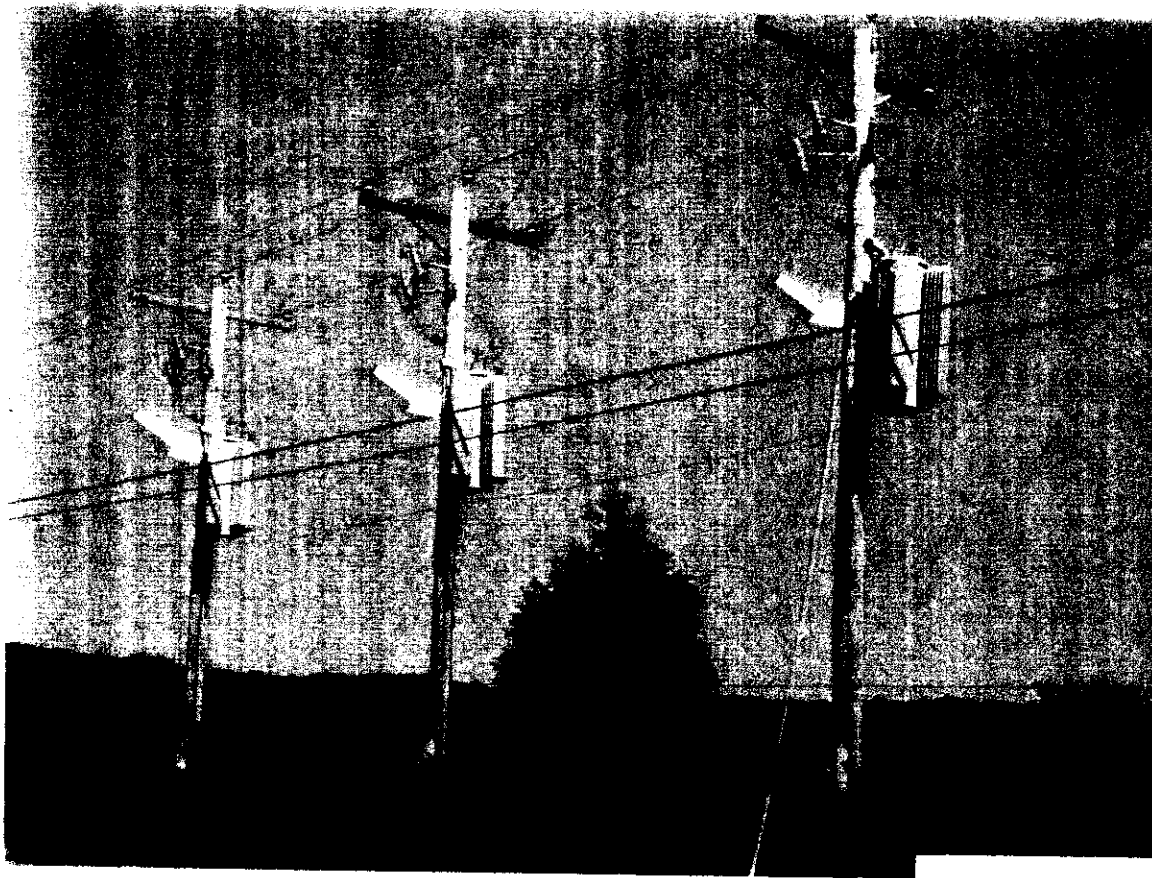
- 48A -

As is clear from this photo of the same pole depicted in the previous photo there is no guy and the pole is already leaning. This situation will get worse over time. Lines will sag, possibly creating hazards with traffic beneath the span. The pole could eventually fall down.



- 49A -

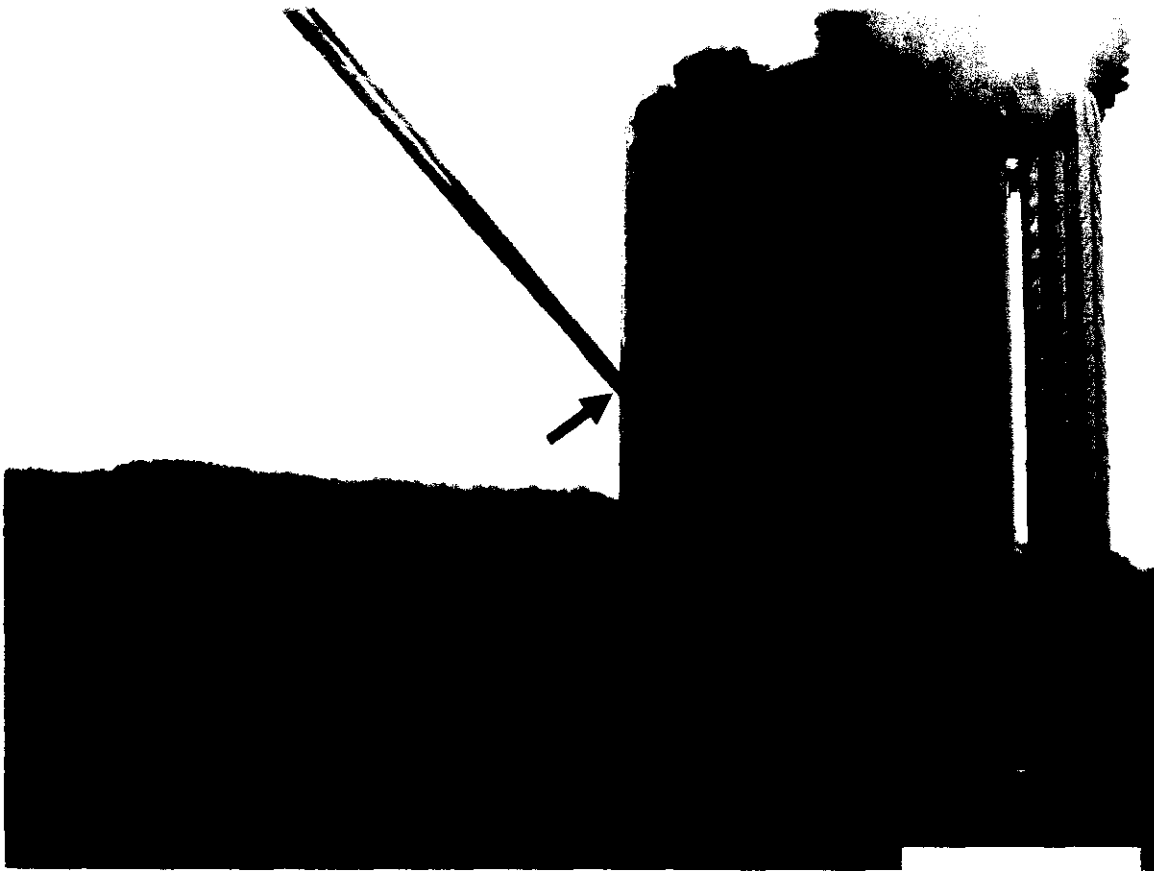
This new pole (Arrow #1) and high voltage primary cable riser (Arrow #2) was installed by EAI. The riser pipe (Arrow #3) stopped below cable (Arrow #4), not 40 inches above as EAI insists is their mandatory standard. The electric cable then flared out from the riser, completely surrounding the cable TV facility (Arrow #4). Comcast ultimately was able to extricate its facilities, but only by cutting them down – a very expensive and wasteful operation that could have been avoided if EAI had sought to notify attachers of this new installation and coordinate the project. This photo was taken at the direction of Marc Billingsley of Comcast.



- 50A -

These photographs were taken at the direction of Jeff Gould of Cox in that company's Russelville system. Here, the power company very recently has (1) installed new poles; (2) put up three step voltage regulators, and (3) put the regulator tanks into direct contact with the pre-existing communications lines. The communications cable near the top of the long regulator tanks is much less than 40 inches to the exposed high-voltage wires and connections on top of the regulator tanks and within easy reach of workers and sudden death. In addition, the neutral that according to EAI must in all cases be 40 inches *above* communications, EAI actually installed several feet *below* communications. But the communications lines are not connected to these poles and are merely rubbing against these regulator tanks. This is obvious from the next photo.





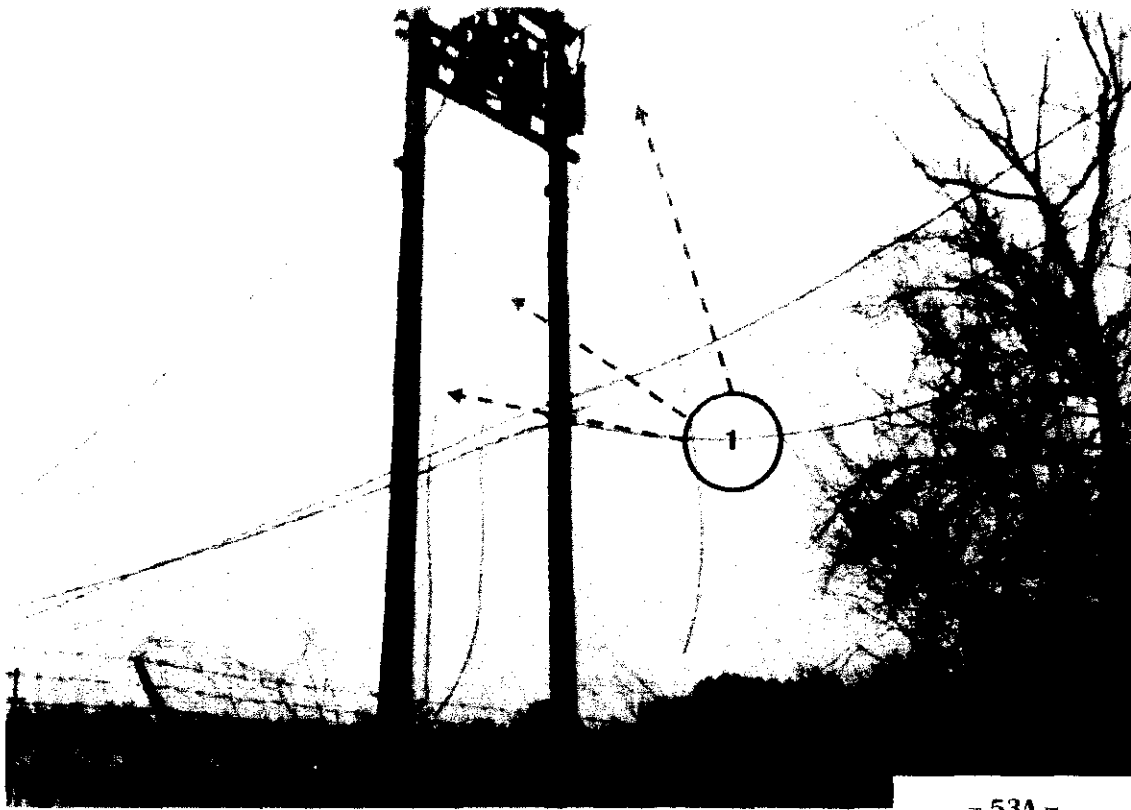
- 51A -

This photo was taken at the direction of Cox's Jeff Gould.



- 52A -

This photo depicts a typical EAI configuration in Arkansas. Not only has the power company installed the electric riser and conduit literally on top of the cable television facilities (Arrow #1), but the riser is too short (Arrow #2), creating multiple violations of the electric-to-communications clearance standards of the NESC. Note also the "fly-away" appearance of the riser conduit. These electric cables above the riser pipes, which pin cable television poles and preventing CATV workers from accessing facilities without touching power, should be corrected immediately by EAI. This photo was taken at the direction of Marc Billingsley of Comcast.



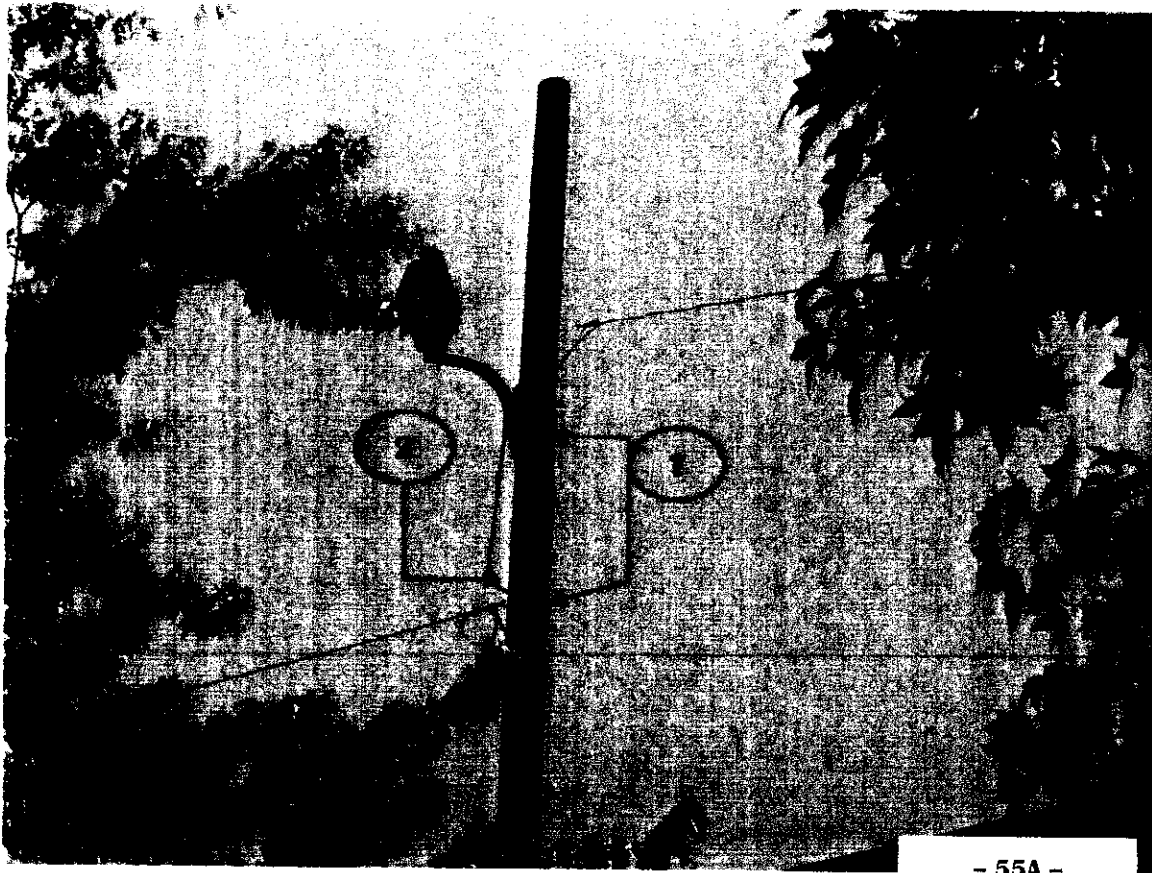
- 53A -

This photograph which was taken at the direction of Marc Billingsley of Comcast, shows dead primary lines hanging down (Arrow #1) from the top of high-voltage power distribution poles near an abandoned bicycle factory at 6301 Patterson Road in Little Rock. The power lines, even though apparently de-activated, create a dangerous situation because they touch the cable television support strand and they hang down low to the ground. The work rules of the NESC apply to electric workers and communications workers. They do not permit workers to treat such lines as dead unless they are disconnected from the source, tested for absence of voltage and grounded. Further, NESC rule 214.B.3. states that lines permanently abandoned shall be removed or maintained in a safe condition. These abandoned lines create serious hazards for workers and the public.



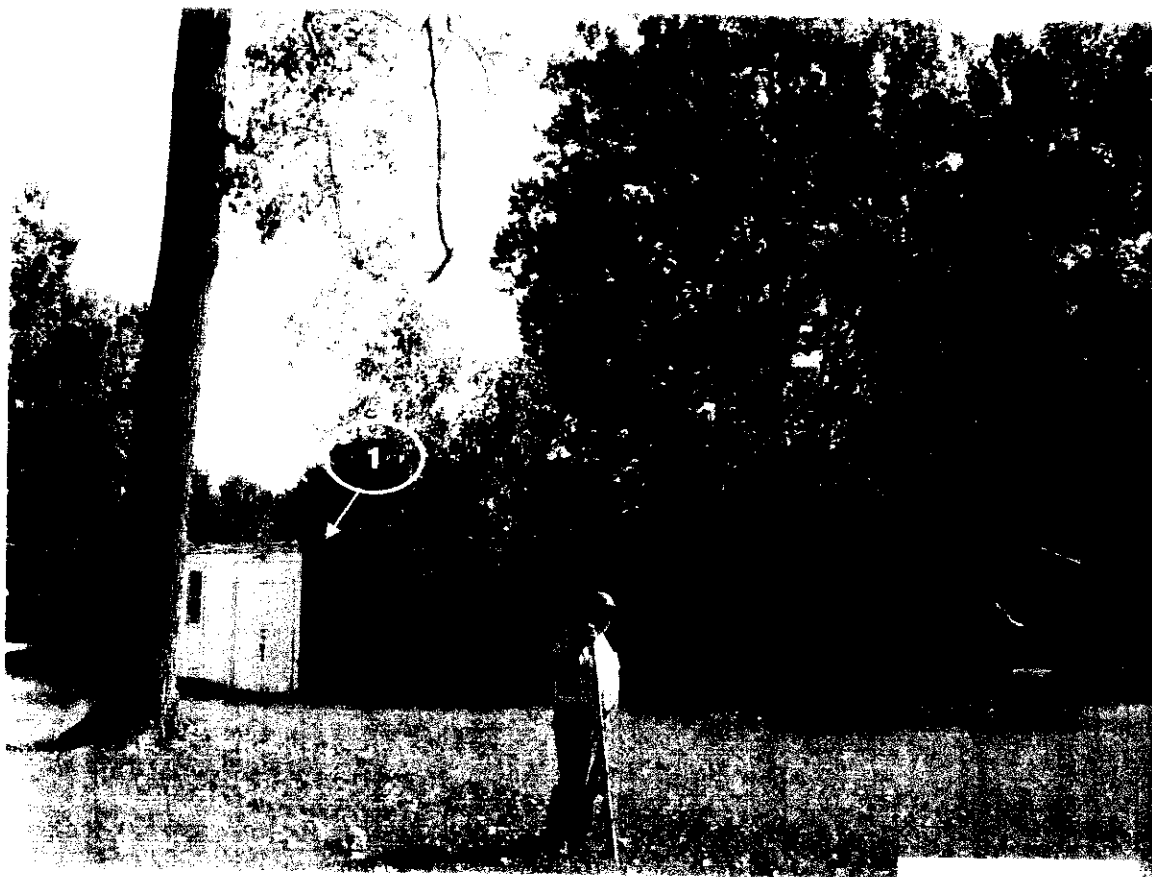
- 54A -

This photo, which I took, shows a pole at the left where there is a new underground electric service riser, with the riser pipe stopped about 4 inches above the cable television facilities (Arrow #3). EAI could have easily installed this service riser to a place above the neutral wire, which would meet the NESC 40" requirement. I was present during a make ready field meeting held on March 24, 2005 to accommodate a project for another communications company in the area needing access to EAI poles. At that meeting EAI and USS told Comcast that they would not extend this riser and would not accept responsibility for fixing the violation that it created. Location: Jacksonville, AR, N. First ST.



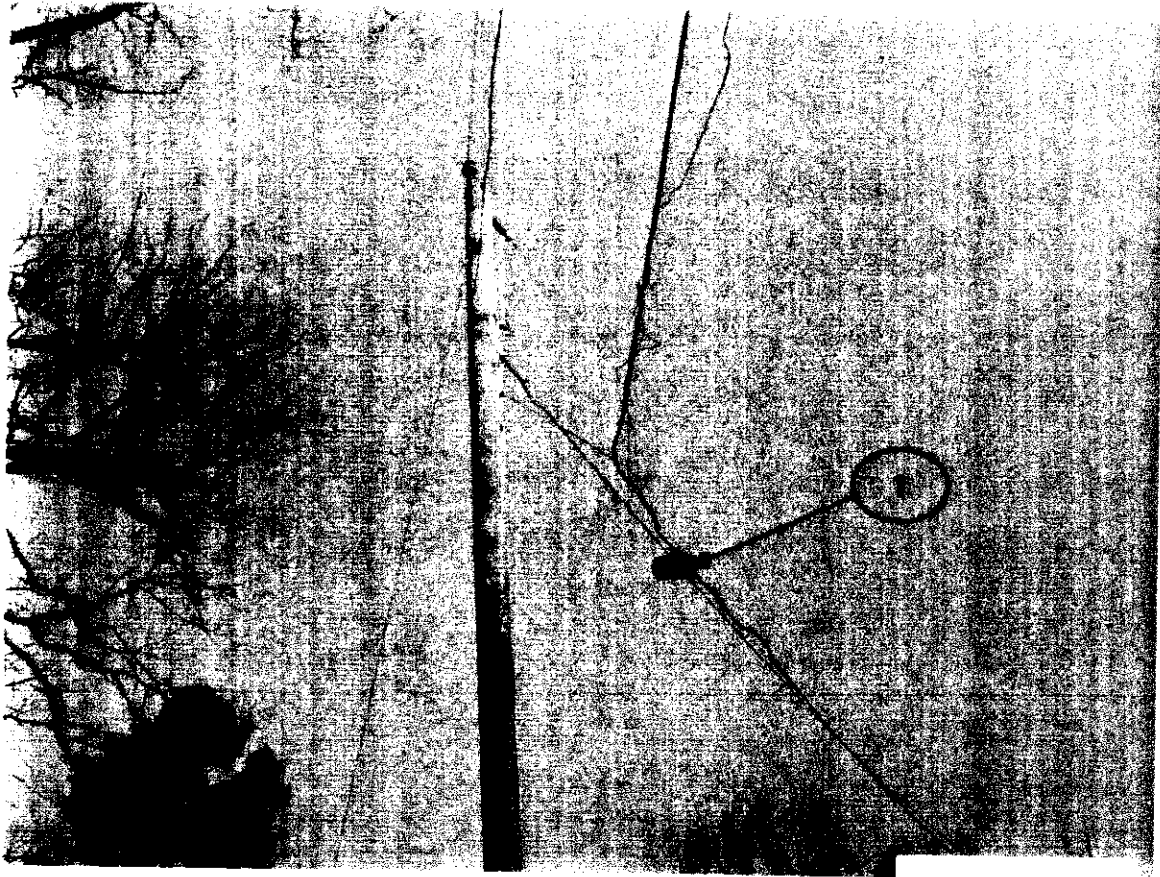
- 55A -

This new street light illuminates the parking lot at the Comcast building in Little Rock. There is ample separation between the light bracket and the communications drop (Arrow #1) but EAI has built this new light with excessively long power leads (Arrow #2), hanging down closer than 12 inches above communications. Location: Little Rock, Enmar Dr



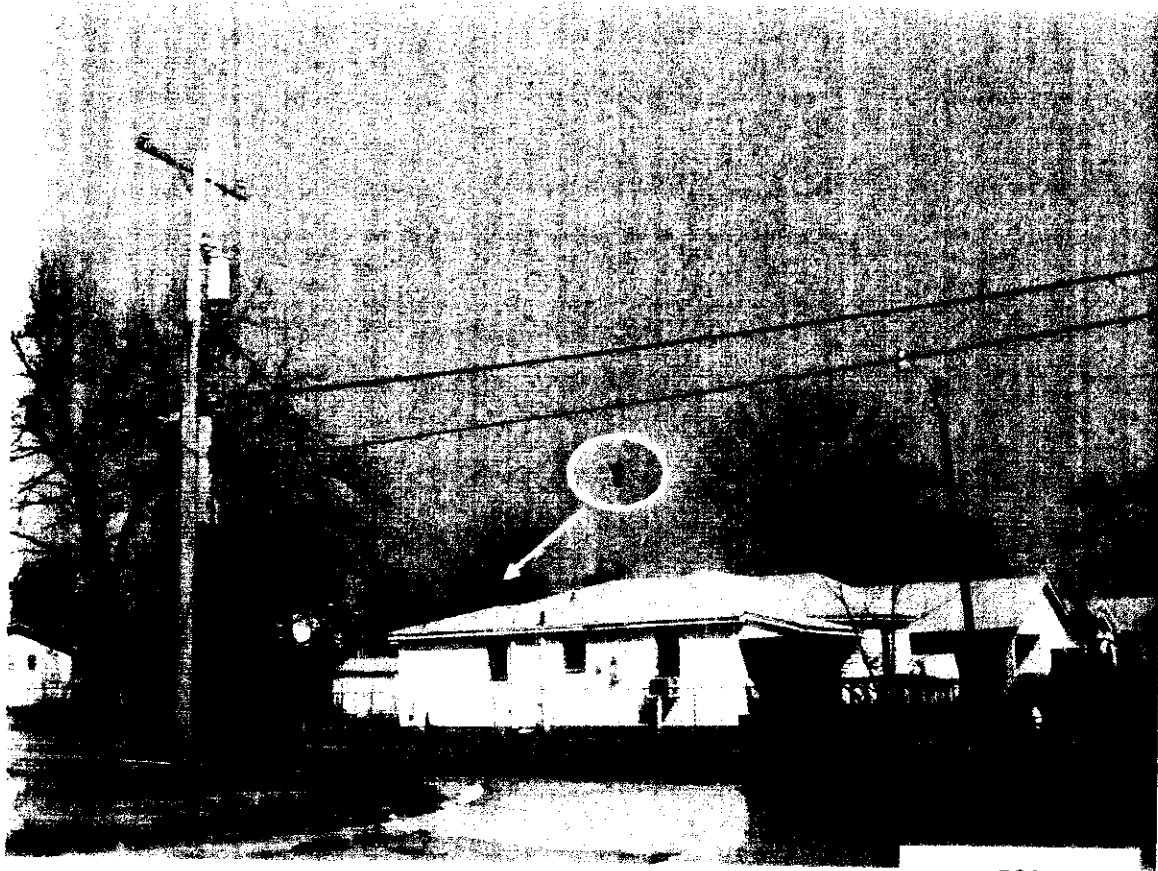
- 56A -

The power lines in this photo, which I took, are along back lot lines between houses. This power drop (triplex cable, 240/120 volts (Arrow #1)) has pulled loose from the house and is being held up by a Comcast drop wire to the same house. Good communications, cooperation and fairness help keep these types of problems from getting out of control. Location: Jacksonville, AR.



- 57A -

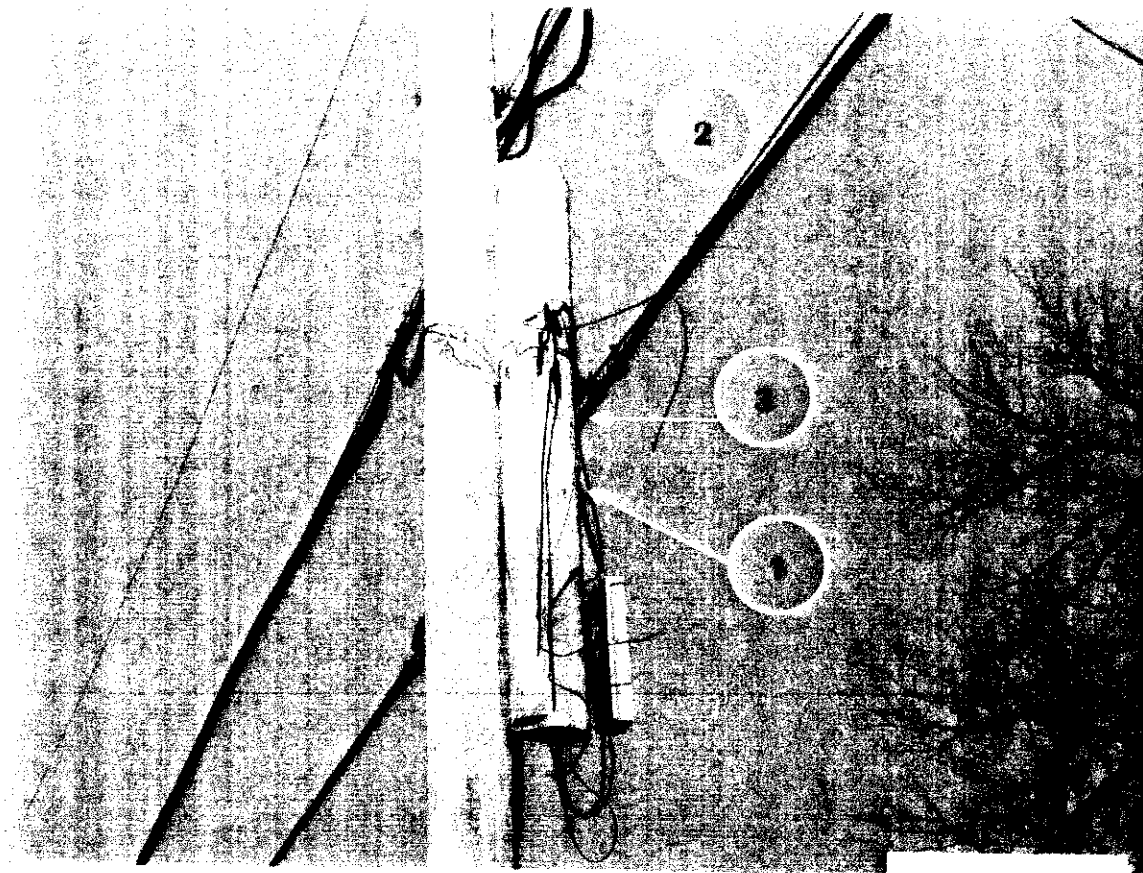
This photo, which I took, shows another EAI pole that apparently was broken by a vehicle. EAI tied Comcast's cable, plus a big chunk of the pole that it had sawed off from the old pole with a piece of scrap wire (Arrow #1). Comcast discovered this during a make-ready ride-out to assist another party in gaining access to Entergy poles in March 2005. This is a good example, and there are countless other ones, where EAI simply did not inform cable that it had performed work on the cable tv facilities. This continues to be a big problem. Location: Jacksonville Hwy 67/267.



- 58A -

This photo, which I took, shows a very low electric service that is only 12 feet above the street (Arrow #1). NESC Rule 232 Table 232-1 requires it to be 16 feet. Unless it is raised, eventually a tall vehicle will pull this hot electric wire down. Location: Little Rock E 11<sup>th</sup> St and J.L. Hawkins St.





- 59A -

This pole, which is the same one as the prior photo shows a 5-foot length of the old broken pole, wired to the new pole by EAI (Arrow #1). You can see that the cable company has transferred its facility (Arrow #2) from the old pole to the new pole, but that the telephone company (Arrow #3) has not. Comcast notified EAI of this hazard, which EAI most likely created in conducting an emergency repair to the pole after a vehicle collision. Location: Little Rock E. 11<sup>th</sup> St and J.L. Hawkins St.